GRENDEL INC.
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GRENDEL
P-30 Pistol

Printed in U.S.A.

Statement of Liability

WARNING:

This pistol may be classified as a dangerous weapon and is surrendered by Grendel with the understanding that the purchaser assumes all liability resulting from unsafe handling or any action that constitutes a violation of any applicable laws or regulations. Grendel shall not be liable for personal injury or loss of property or life resulting from the use of this pistol under any circumstances, including intentional, reckless, negligent or accidental discharge. Grendel will not be liable for any alterations to this pistol or any parts thereof. Grendel will not condone any changes to be made after the pistol has left the factory. If your Grendel pistol is in need of service or repair, please return to the factory for service.

Please read this manual carefully. Be sure you understand the functions of this pistol before loading and firing it. Carefully read and follow the "safety warnings" section of this manual. Always practice safe handling of this pistol.

Please Be Careful

READ CAREFULLY BEFORE USING YOUR FIREARM

Always treat every gun as if it were loaded.

Never accept or pick-up a firearm without checking the magazine and the chamber to assure the weapon is empty. Do not trust the extractor to clear the chamber - look or feel!

Always make sure the muzzle is pointed in a safe direction at all times.

Never store a firearm with a cartridge in the chamber.

Never store firearms and ammunition together, keep them locked up and away from children or careless adults.

Never keep a loaded firearm in the home, car, boat, or R.V.

Never touch the trigger when working the slide.

Never alter any components of your firearm.

Never take medications, drugs or alcohol when handling firearms.

Always use only clean, dry, original factory ammunition.

Never load or unload a firearm without assuring the muzzle is pointed in a safe direction.

Never load a firearm except immediately before shooting.

Never handle firearms without proper shooting glasses and ear protection.

Never place finger on trigger until ready to fire.

Never point a firearm at anything you do not intend to shoot.

Make sure your "audience" is always 5 feet in back of you, not next to you when firing.

Never shoot at any water surface or any surface where a ricochet can occur.

Never shoot until you are sure of your backstop and what lies beyond it.

If the gun does not discharge after pulling trigger, do not change its direction for at least 30 seconds, you could be having a "hang fire."

If you do not understand how to operate any of our products or have any questions about their safe handling, please write us.

SAFE GUN HANDLING IS YOUR RESPONSIBILITY

INTRODUCTION

The .22 Winchester Rim Fire Magnum cartridge has long been unappreciated by the industry and the shooters. The .22 WRFM comes close to the 9mm Parabellum in energy, especially in longer barrels, with superior penetration and flatter trajectory. Furthermore our fully loaded 30 round magazine weighs only 6 oz.

Through an extensive research and development effort, GRENDEL INC. has successfully adapted the .22 Magnum cartridge to a blowback, high performance firearm system of which the P-30 Pistol is the first version.

The P-30 is designed and manufactured in the United States. Thanks to the advanced design and modern computerized machinery, the P-30 can be manufactured at a low cost without compromising quality in materials or workmanship.

DESCRIPTION

The P-30 is a selfloading pistol for the .22 WRFM cartridge and operated by fluted chamber blowback. The firing mechanism is single action only with ambidextrous safety levers disconnecting the trigger and blocking the firing pin.

The gun is loaded with a 30 round magazine inserted into the grip. The frontsight is adjustable for windage. Elevation is changed by replacing the front sight.

The P-30M version has a removable muzzle brake.

TECHNICAL SPECIFICATIONS

Caliber	.22 WRF Magnum
Mag. capacity	30 rounds
Length	8.5"
Height	5.7"
Barrel	5"
Sight radius	7.2"
Weight unloaded	20 oz.

CONSTRUCTION

The P-30 has five main component groups. The slide, frame, grip, firing mechanism and the magazine.

The slide is cut from a solid stock of La Salle Stressproof™ steel by computerized tool machines. The front end is closed by the barrel sleeve and the rear end by a Zytel™ extension also forming the rear sight.

The frame is an all steel construction which holds the barrel, firing mechanism and also forms the slide rails, and ejector. The barrel is press fitted into the frame and has a fluted chamber.

The grip is made of glass reinforced Zytel™ and also forms the trigger guard. It is hollow to accept the magazine and attaches to the frame with eight Allen™ screws. The forend is attached to the front of the grip and closes the bottom of the slide.

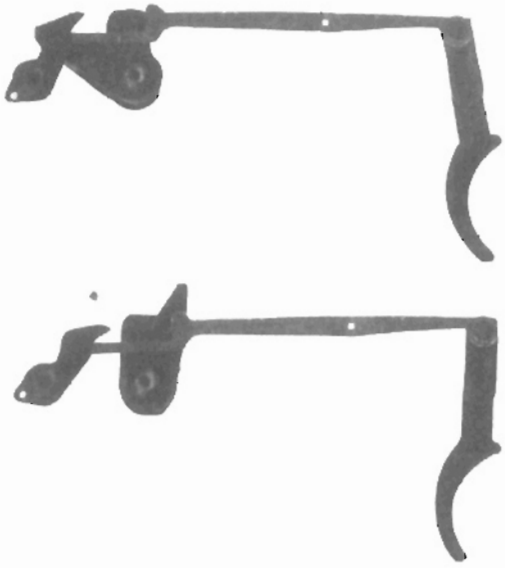
The trigger is connected to the sear by the trigger bar. The novel, flat shaped hammer is driven by a single torsion spring. The safety is rotating on the hammer axis and actuates the safety cam and firing pin block. The firing pin is of low mass and has a wedge shaped tip.

FUNCTIONING

When the trigger is pulled, the trigger bar is pulled forward engaging the sear which releases the spring loaded hammer. The firing pin ignites the cartridge. The powder gas drives the bullet forward and the slide backwards simultaneously. Gas also flows into the chamber flutes reducing case friction and increasing the slide impulse.

The recoilspring drives the slide forward again. The top cartridge in the magazine is picked up by the breechface and pushed into the barrel.

When the trigger is released, the trigger bar moves back and behind the sear. The P-30 is then ready for another shot.



On its way back, the slide is gradually slowed down by the recoilspring and the cocking of the hammer. The trigger bar is depressed by the slide and releases the sear which engages the hammer. Close to the rear position, the empty case hits the ejector, and is thrown out of the gun.

If the slide is not in battery, the trigger bar is pushed down, not able to reach the sear thus preventing firing. Due to the large magazine capacity of the P-30 the slide does not stay back after the last round.

INSTRUCTIONS FOR USE

TO LOAD, fill the magazine by pushing down the cartridges with the rim about 3/8" from the rear of the magazine and then back. Be careful not to push the rim behind the proceeding round. Do not tilt down the front end of the rounds as this can also dislocate the rims. When full it is a good practice to tap the back of the magazine against a firm surface to fully align the rounds.

Make sure the gun is on SAFE (up position) and insert the magazine into the grip of your P-30. Pull the slide back all the way and release. After pushing down the safety the gun is ready to fire.

TO UNLOAD

Put gun on SAFE. Depress the magazine catch and remove the magazine. Pull back the slide to extract a chambered round. Check visually that the chamber is empty! Release the slide.

DISASSEMBLY

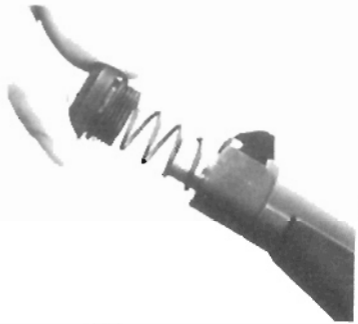
Make sure the gun is on SAFE, the magazine is out, and the chamber is empty.

Unscrew the barrel sleeve (on P-30M also the muzzle brake) and pull out the recoilspring with its bushing.

The forend can now be pulled forward and removed.

Pull the slide all the way back and up to disengage the frame. Push the slide forward over the barrel and remove.

No further disassembly is recommended.



ASSEMBLY

Make sure the hammer is cocked and the gun on SAFE.

Pull the slide back over the barrel and down to line up with the frame rails. Push the slide forward into battery.

Put the forend back under the slide.

Insert the recoil spring bushing with the small end in. Then push in the spring with the help of the barrel sleeve. Screw the sleeve on firmly to complete the assembly.

MALFUNCTIONING

Proper function of your P-30 is directly related to maintenance and care. Rimfire ammunition fouls a gun much more than centerfire, so it is very important to keep your P-30 clean and lubricated to insure reliable operation.

Some of the more common types of malfunctions which may occur are as follows:

- MISFIRE: failure of the cartridge to ignite when the hammer fails.

If this occurs, keep firearm pointed in safe direction, apply the safety, wait 15 seconds, operate slide manually and continue shooting.

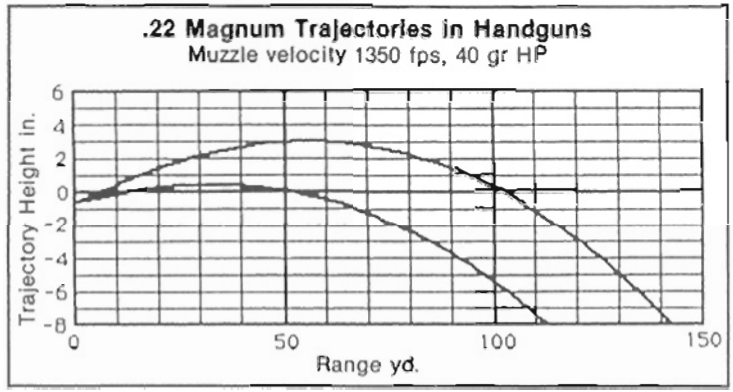
- FAILURE TO FEED: this occurs when a cartridge has been fed from a magazine but not fully chambered.

If this occurs, keep the firearm pointed in a safe direction, remove that cartridge by operating the slide manually and continue shooting.
*The most common causes are dirt or foreign objects impeding the magazine follower.

- FAILURE TO EJECT OR EXTRACT: a fired case is not fully extracted from the chamber or ejected from the P-30.

Again, keep firearm pointed in safe direction, remove the magazine and clear the gun by operating slide.
*The most common causes are a damaged extractor, ejector, or dirt.

If any of the above problems are not solved by cleaning or by use of other brands of ammuntion, stop firing unload, and returr. the P-30 to our Service Department.



PARTS LIST

100 SLIDE
105 SLIDE EXTENSION
110 SLIDE SCREW
115 FIRING PIN SCREW
120 FIRING PIN
125 FIRING PIN SPRING
130 EXTRACTOR
132 EXTRACTOR PIN
135 EXTRACTOR SPRING
140 FRONT SIGHT

150 BARREL
155 BARREL PIN
160 BARREL SLEEVE
165 BARREL SLEEVE O-RING
170 RECOIL SPRING
175 RECOIL SPRING SLEEVE

019 FRAME ASSEMBLY
205 GRIP
210 MAGAZINE CATCH ASSEMBLY
215 MAGAZINE SPRING
220 GRIP SCREWS
225 GRIP NUTS
230 FOREND

240 TRIGGER
245 TRIGGER AXIS
250 TRIGGER SPRING
255 TRIGGER BAR
260 TRIGGER BAR SPRING

270 SEAR
275 SEAR AXIS
280 SEAR SPRING

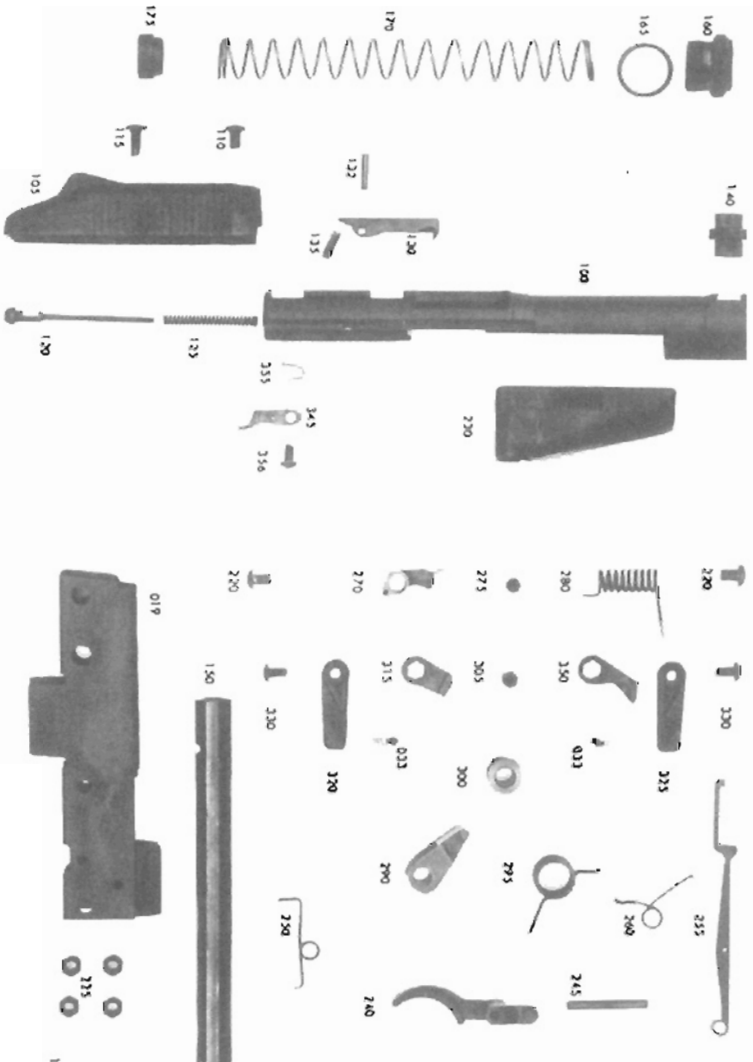
290 HAMMER
295 HAMMER SPRING
300 HAMMER SPRING BUSHING
305 HAMMER AXIS

033 SAFETY SNAP ASSEMBLY
315 SAFETY CAM
320 SAFETY LEVER RIGHT
325 SAFETY LEVER LEFT
330 SAFETY SCREWS

345 FIRE PIN BLOCK
350 FIRE PIN BLOCK CAM
355 FIRE PIN BLOCK SPRING
356 FIRE PIN BLOCK SCREW

365 MAGAZINE HOUSING
370 MAGAZINE FOLLOWER
375 MAGAZINE SPRING
380 MAGAZINE BOTTOM
381 MAGAZINE PLATE

390 BOX
395 MANUAL
400 6 PACK
405 12 CASE



WARRANTY INFORMATION

GRENDEL INC. warrants to the original purchaser of the Grendel P-30 for unlimited time against defects in material or workmanship. Our obligation under this warranty shall be restricted to replacing or repairing free of charge any P-30 or part thereof returned to us and found defective. This does not apply if the P-30 has been damaged by misuse or accident, or after any service or modification by other than GRENDEL INC. No other warranty, expressed or implied, is provided. GRENDEL INC. shall not be liable for consequential damages.